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MARDİN'İN SEKTÖREL PANORAMASI

TEMATİK BAZI SORUNLAR
VE ÇÖZÜM ÖNERİLERİ



MARDİN ARTUKLU ÜNİVERSİTESİ
KAMU ÖZEL VE KARMA SEKTÖR
İŞ BİRLİĞİ KOORDİNATÖRLÜĞÜ
(MAÜKÖK)

Editör
Prof. Dr. Mehmet Behzat Ekinici





Mardin Artuklu Üniversitesi
Kamu Özel ve Karma Sektör İş Birliği Koordinatörlüğü (MAÜKÖK) Yayını

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SECTORAL PANORAMA OF MARDİN
SOME THEMATIC PROBLEMS AND PROPOSALS FOR THEIR SOLUTIONS

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Mardin, 2023



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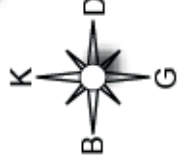
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Ön Söz

Bilimsel bilginin üretimini sağlayan, bilimin/ilimin gelişmesi, geliştirilebilmesi misyonunu yüklenen ve bu amaçla araştırmayı ilke edinen öğrenciler ve yenilikçi akademisyenler yetiştiren üniversiteler, ürettikleri teorik bilgilerle dünya bilim tarihine yön verirler. Üniversitelerde üretilen teorik bilgilerin ve bilimsel paradigmaların pratikte bir karşılığının olması, bilimsel bilginin yaygın etkisini artırır. Zira sahaya dokunan ve bir ihtiyacı pratik biçimde karşılayan akademik bilgi daha geniş kesimleri etkileme gücüne sahiptir.

İşte bu eser de Mardin Artuklu Üniversitesi Kamu Özel ve Karma Sektör İş Birliği Koordinatörlüğü (MAÜKÖK) inisiyatifiyle bu amaçla yola çıkan akademisyenlerin ortaya koyduğu akademik bir çalışmadır. Ağırlıklı olarak Mardin Artuklu Üniversitesi'nden olmakla birlikte Türkiye'nin farklı üniversitelerinde görev yapan akademisyenler tarafından hazırlanan bu çalışmanın odak noktasını Mardin ortak paydası oluşturmaktadır. Bu çerçevede şehrin/bölgenin bazı yapısal sorunları tespit edilerek çözüm önerilerinde bulunulmuştur.

Alanlarında uzman akademisyenler tarafından hazırlanan bu eser, bilimsel bilgilerin ve teorilerin pratikteki karşılıklarını ve uygulanabilirliklerini gösterir bir nitelik arz etmektedir. Dolayısıyla ortaya konan bazı sorunlara yönelik çözüm önerileri, bir saha çalışmasına veya bir ekonometrik analize dayalı olduğundan, doğrudan ilgililerin uygulayabileceği niteliktedir.

Bu vesileyle, eserin ilgililere faydalı olmasını ve şehrin/bölgenin daha farklı sorunlarına değinen ve çözümler üreten benzer çalışmaların artarak sürdürülmesini temenni ederim.

Prof. Dr. İbrahim Özcoşar

MAÜ Rektörü

Preface

Universities, that provide the production of scientific knowledge, undertake the mission of the development of science, and educate students and innovative academics for this purpose, shape the history of world science with their theoretical knowledge. The existence of a practical counterpart of theoretical knowledge and scientific paradigms produced in universities increases the widespread effect of scientific knowledge. Because academic knowledge that touches the field and meets a need in a practical way has the power to influence wider segments.

This work is an academic study put forward by academics who set out for this purpose with the initiative of Mardin Artuklu University Public Private and Mixed Sector Cooperation Coordinatorship (MAUKOK). The focus of this study, which was prepared by academics working in different universities in Turkey, however mainly from Mardin Artuklu University, is the common denominator of Mardin. In this framework, some structural problems of the city/region were identified and relevant solutions were proposed.

This work, prepared by academicians who are experts in their fields, shows the practical equivalents and applicability of scientific knowledge and theories. Therefore, since the solution proposals for some of the problems put forward are based on a fieldwork or an econometric analysis, they can be applied directly by those concerned.

On this occasion, I hope that the work will be useful to those concerned and similar studies that address different problems of the city/region and propose solutions will increasingly continue.

Prof. Dr. İbrahim Özcoşar
MAU Rector

MAÜKÖK Hakkında

Mardin Artuklu Üniversitesi Kamu Özel ve Karma Sektör İş Birliği Koordinatörlüğü (MAÜKÖK), MAÜ'yü 'bölgesel kalkınma odaklı' bir kurum hâline getirerek şehrin ve bölgenin katma değer seviyesini yükseltme ana hedefine yönelik hareket etmektedir.

MAÜKÖK, bu kapsamda şunlara yoğunlaşmaktadır:

- a) Şehrin ve bölgenin temel sektörel ve kurumsal fizikî ve dijital envanterini çıkarmak,
- b) Bunların MAÜ tarafından karşılanabilecek temel ihtiyaçlarını tespit etmek,
- c) MAÜ'deki akademisyenlerin ve idarî personelin uzmanlıkları itibarıyla fizikî ve dijital envanterini çıkarmak,
- d) Söz konusu ihtiyaçlarla kaynakları buluşturmak.

MAÜKÖK ayrıca 'sektörel iş birliklerinin artırılması' ve 'kurumsal kapasitenin geliştirilmesi' ara hedeflerine yönelik olmak üzere fakat bunlarla sınırlı kalmamak kaydıyla, şu faaliyetlerin icrasını koordine etmektedir: Projeler, Eğitim programları, Toplantılar, Bilgi destekleri, Saha çalışmaları-araştırmalar, İstatistikler-iktisadî panoramalar, Teknoloji transferleri, Ar-Ge, Ticarî istihbarat ve strateji, Sosyo-kültürel faaliyetler.

Neticede MAÜKÖK; MAÜ ile tarım, sanayi ve hizmet sektörleri bağlamında kamu, özel ve karma sektörler arasında geliştirilecek çeşitli iş birliği imkânlarını araştırmaya, ilgili stratejileri tespit etmeye ve bunlara dair kurumsal ve sektörel koordinasyonu sağlamaya çalışmaktadır.

MAÜKÖK, bu hedeflere ulaşmada daha etkin hareket edebilmek için şu üç alt kurulu oluşturmuştur:

- 1) MAÜTAS: MAÜ Tarım Sektörü İş Birliği Kurulu,
- 2) MAÜSAS: MAÜ Sanayi Sektörü İş Birliği Kurulu,
- 3) MAÜHİS: MAÜ Hizmet Sektör İş Birliği Kurulu.

MAÜKÖK, 2022-23 döneminde bu kurullar temelinde sırasıyla tahıl, tekstil ve turizm olmak üzere üç tematik sektör belirlemiş olup ilk etapta bunlara yönelik olmak üzere Mardin'deki ilgili sektör temsilcileriyle iş birlikleri gerçekleştirmektedir. Bilahare bu çerçeve genişletilerek şehrin tüm sektörleri ile iş birlikleri hedeflenmiştir.

İşte bu eser, söz konusu iş birliklerinin daha sistematik tarzda yapılmasına zemin teşkil edecek bir adım olarak değerlendirilmektedir. Dahası, akademyanın sahip olduğu bilgi birikimini ve tecrübesini paylaşmasına bir nevi aracılık rolü üstlenmekte ve bunların ilgililerce kullanılmasına/uygulanmasına ortam hazırlamaktadır.

Zira bir ilim/bilim insanının dediği gibi "uygulaması olmayan ilim/bilim, doğru ile yanlış arasında bir yerdedir".

About MAUKOK

Mardin Artuklu University Public Private and Mixed Sector Cooperation Coordinatorship (MAUKOK) acts towards the main goal of raising the added value level of the city (Mardin) and the region by making MAU a 'regional development-oriented' institution.

In this context, MAUKOK focuses on:

- a) Preparing the basic sectoral and institutional physical and digital inventory of the city and the region,
- b) Determining their basic needs that can be met by MAU,
- c) Making a physical and digital inventory of the academics and administrative personnel at MAU in terms of their expertise,
- d) Bringing together the aforementioned needs and resources.

MAUKOK also coordinates the execution of the following activities, including but not limited to the intermediate objectives of 'increasing sectoral collaborations' and 'development of institutional capacity': Projects, Training programmes, Meetings, Information supports, Field studies-researches, Statistics-economic panoramas, Technology transfers, R&D, Commercial intelligence and strategy, and Socio-cultural activities.

After all, MAUKOK searches for cooperation possibilities to be developed between MAU and the public, private, and mixed sectors in the context of agriculture, industry, and service sectors; to identify relevant strategies and to provide institutional and sectoral coordination regarding them.

MAUKOK has established the following three sub-committees in order to act more effectively in achieving these goals:

- 1) MAUTAS: MAU Agriculture Sector Cooperation Committee,
- 2) MAUSAS: MAU Industry Sector Cooperation Committee,
- 3) MAUHIS: MAU Service Sector Cooperation Committee.

In the 2022-23 period, MAUKOK has determined three thematic sectors; respectively grain, textile, and tourism, on the basis of these committees, and cooperates with the relevant sector representatives in Mardin. Subsequently, this framework was expanded. The eventual aim has been establishing cooperation with all sectors of the city.

This book is considered as a step for constituting a suitable base for these collaborations to be made in a more systematic manner. Moreover, it acts as a mediator for the academy to share its knowledge and experience and prepares the environment for their use/implementation by those concerned.

Because, as one scholar said, "science without application is somewhere between true and false".

Giriş

'Kalkınma' her ne kadar iktisadî bir kavram olarak görülse de aslında aynı zamanda sosyal, kültürel, siyasî, eğitimle ilgili, sağlıkla ilgili vs. olmak üzere çok yönlü bir değişimi ifade eder. Dolayısıyla bu şekilde geniş açıyla bakıldığında, kişisel/kurumsal/bölgesel/ülkesel vs., her ne için kullanılıyorsa onunla ilgili ciddi, köklü ve zamana yayılan bir sürece işaret etmektedir.

Konu özellikle bir yörenin kalkınması olunca, hatıra bir yandan bu sürecin gerektirdiği altyapının-üstyapının uygunluğu gelirken, diğer yandan bunun etkileyeceği kişilerin/kurumların/kesimlerin böylesi bir değişime hazır olup olmaması da gelir. Yani 'kalkınma için ilgili her taraf bu değişime-dönüşüme onay vermekte midir ve gerektiğinde katkı sağlamaya hazır mıdır?' sorularının cevabının olumlu olması gerekir.

Mesele Mardin ölçeğinde ele alındığında, herkes ve her kesim için bu cevabın olumlu olduğunu söylemek belki mümkün olmayacaktır ama çoğunluğun onay verdiği ve katkıya hazır olduğu rahatlıkla ifade edilebilir. Peki, nereden anlaşılabilir bu? Elbette kişilerin yaklaşımından, kurumlar arası koordinasyondan ve iş birliği potansiyelinden...

İşte bu eser de bu çabaların bir nüvesi olarak değerlendirilebilir. Eserin oluşturulma fikri, MAÜKÖK'e ve Mardin'deki sektörel temsilci kuruluşlarla gerçekleştirilen istişare toplantılarına dayanmaktadır. 2022-23 döneminde Mardin Artuklu Üniversitesi akademisyenleri ile çok sayıda toplantıda bir araya gelen kamu, özel ve karma sektör temsilcileri; Mardin'de başta tahıl, tekstil ve turizm olmak üzere tarım, sanayi ve hizmet sektörlerine dair müzakerelerde bulunmuş ve şehrin/bölgenin bu çerçevede yapısal sorunlarını tespit ederek çözümüne yönelik beyin fırtınası mahiyetinde müzakerelerde bulunmuştur.

Eserin sektörler itibarıyla ilk bölümleri bu toplantı çıktılarına dayanmaktadır. Diğer kısımlar ise başta MAÜ akademisyenleri olmak üzere sektörel temsilci kuruluşlardan yazarların katkısı ile oluşturulmuştur. Esere ilişkin kısa bilgiler şöyledir:

- Eser; tarım, sanayi ve hizmet sektörlerine yönelik dörder adet olmak üzere toplamda 12 bölümden oluşmaktadır.
- Her bölümün başında içeriğin daha iyi anlaşılabilmesi için bir içindékiler listesi ve bölümün 'amaçları, bulguları ve teklifleri' Türkçe ve İngilizce dillerinde verilmektedir.
- Eserin sonunda ise Mardin'in seçilmiş bazı sektörel sorunlarına ve ilgili kurumlar itibarıyla çözümlerine dair özet bir dosya yer almaktadır.
- Eserin her bölümünde ya bir saha araştırması ya da bir ekonometrik analiz mevcuttur. Zira amaç, sorunları ilk elden tespit ederek ayakları yere basan çözüm tekliflerinde bulunmaktır.

Eser, elbette bu hâliyle Mardin'in tüm sorunlarına çözüm arayışında değildir. Fakat şehrin/bölgenin tematik bazı sorunlarını ele alarak bunlara yönelik çözüm önerilerine odaklanıyor olması açısından önemli bir adım olduğu da açıktır.

Sıra geldi teşekkür safhasına...

- MAÜKÖK'ün oluşumuna uygun ortam hazırlayan MAÜ Rektörü Prof. Dr. İbrahim Özcoşar'a teşekkür ederim.
- MAÜKÖK'ün ilk Yönetim Kurul Üyeleri Öğr. Gör. Ferhat Demiralp (İletişim ve Bilgi-İşlem); Dr. Öğr. Üyesi Veysi Acıbuca, Dr. Öğr. Üyesi Yavuz Selim Gülmez (MAÜTAS); Dr. Öğr. Üyesi Ömer Doru, Dr. Öğr. Üyesi Ömer Fazıl Emek (MAÜSAS); Dr. Öğr. Üyesi Şeyhmus Aykol ve Dr. Öğr. Üyesi İlyas Bayar'a da (MAÜHİS) katkılarından dolayı teşekkürler.
- Kitabı katkıda bulunan bütün yazarlar da bir teşekkürü hak ediyor elbette. Burada özellikle belirtmek gerekir ki, farklı şehirlerden olmalarına rağmen, yazarların Mardin'in kalkınması amaçlı bir yayında buluşmuş olması takdire şayandır.
- Mardin İli/İlçeleri Odalarının/Borsalarının tüm ekip üyelerine, özellikle de şu isimlere basımdaki desteklerinden dolayı şükranlarımı sunarım: KTB Yönetim Kurulu Başkanı Mehmet Şahin, Genel Sekreteri Abdulkadir Şahin, Genel Sekreter Yardımcısı Metin Sert; KTSO Yönetim Kurulu Başkanı Mahmut Dünder, Genel Sekreteri Ahmet Aslan, Akreditasyon Sorumlusu Ferhat Dünder; MTSO Yönetim Kurulu Başkanı Hatip Çelik, Genel Sekreteri Çetin Sasa, Akreditasyon Sorumlusu Elif İlhan; NTB Yönetim Kurulu Başkanı Necdet Aktaş, Genel Sekreteri Abdullah Dal, Akreditasyon Sorumlusu Ercan Çelik; NTSO Yönetim Kurulu Başkanı Mahsum Özmen, Genel Sekreteri Abdulkadir Güneş, Akreditasyon Sorumlusu İlhan Özmen.
- Özel teşekkürüm ise her zaman olduğu gibi, bana akademik araştırmacılık ve sosyal girişimcilik ruhunu aşılayan Muhterem Babam Mamoste Süleyman Beyefendi'yedir.

Mardin Artuklu Üniversitesi'nin, şehriyle/bölgesiyle her noktasına kadar yakın bağlantılı olması, bu tür çabaların 'kalkınma' sürecine katkı sağlaması ve sayılarının artması temennisiyle...

Leylak-Mardin, 25 Mayıs 2023

Prof. Dr. Mehmet Behzat Ekinci

Mardin Artuklu Üniversitesi (MAÜ), İİBF, İktisat Bölümü Öğretim Üyesi

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Introduction

Although 'development' is seen as an economic concept, it also represents social, cultural, political, educational, health, etc. changes as well. Therefore, when viewed from a broad perspective in this way, personal/corporate/regional/national, etc. related to whatever it is used for, it points to a serious, deep-rooted and long-run process.

When it is the development of a region, the suitability of the infrastructure-superstructure required by this process come to mind on the one hand, and whether the people/institutions/sections that will be affected by it are ready for such a change on the other hand. In other words, the answer to the questions 'Do all relevant parties for development approve this change-transformation and are they ready to contribute when necessary?' should be positive.

When the issue is handled on the scale of Mardin, it may not be possible to say that this answer is positive for everyone and every sections, but it can be easily stated that the majority approves and is ready to contribute. So how can this be understood? Of course, from the approach of people, inter-institutional coordination, and cooperation potential...

This work can be considered as a core of these efforts. The idea of preparing such a work is based on MAUKOK and consultation meetings with sectoral representative organisations in Mardin. Public, private, and mixed sector representatives who came together with Mardin Artuklu University academicians in many meetings in the period 2022-23 negotiated on agriculture, industry, and service sectors; especially grain, textile, and tourism, and determined the structural problems of the city/region within this framework and made negotiations as a brainstorm for their solutions.

The first part of the work in terms of sectors are based on the outputs of these meetings. Other parts were prepared with the contribution of authors from sectoral representative organisations, especially MAU academics. Brief information on the book is as follows:

- The book consists of 12 chapters, 4 for each sector namely agriculture, industry, and service.
- At the beginning of each chapter, a table of contents and the titles of 'purposes, findings, and proposals' are given in Turkish and English languages for a better understanding of the theme.
- At the end of the book, there is a brief file on some selected sectoral problems of Mardin and their solutions by relevant institutions as well.
- Each part of the book includes either a field study or an econometric analysis. Because the aim is to identify the problems by first hand and to propose concrete solutions accordingly.

Of course, this book does not seek to solve all problems of Mardin, however, it is obvious that this is a significant step in terms of addressing some thematic problems of the city/region and focusing on their solutions.

Now, it is time to thank...

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- My special thanks, as always, go to my honourable Father Mamoste Süleyman, who instilled in me the spirit of academic research and social entrepreneurship.

With the hope that Mardin Artuklu University is closely connected with its city/region in all aspects and that such efforts will contribute to the 'development' process and increase in number...

Leylak-Mardin, May 25, 2023

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BÖLÜM 8

Economies of Scale in an Organised Industrial Area; The Case of Mardin

Bir Organize Sanayi Bölgesinde Ölçek Ekonomileri; Mardin Örneği

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Bölüme ilişkin özet bilgiler

a) Amaç: Bu bölümün amacı, Mardin Organize Sanayi Bölgesi'ndeki (MardinOSB) içsel ve dışsal ölçek ekonomilerini tespit etmek ve iyileştirilebilmeleri için bazı tekliflerde bulunmaktır.

b) Bulgular: Veriler, firmaların hem içsel hem de dışsal ölçek ekonomilerinden etkilendiğini göstermektedir. Ancak, pozitif ölçek ekonomilerinden faydalanma dereceleri negatif olanlardan daha fazladır.

c) Teklifler: Firmalar, negatif içsel ekonomilerini bertaraf edebilmek için aşırı işgücü ve personel uzmanlaşmasından kaynaklanan dezavantajları ortadan kaldırmalı ve idarî yapılarını gözden geçirmelidirler. Öte yandan, negatif dışsal ekonomileri içinse MardinOSB yönetiminin, bölgelerindeki altyapı ihtiyaçlarını tamamlaması icap etmektedir.

Brief information on the chapter

a) Aim: The aim of this chapter is to examine the internal and external economies of scale in the Mardin Organised Industrial Area (MardinOSB) and to make some suggestions for their improvement.

b) Findings: The data show that firms are affected by both internal and external economies of scale. However, the impact of positive internal and external economies of scale is greater than that of negative ones.

c) Proposals: Proposed solutions have been identified to tackle negative internal and external economies of scale. To mitigate the negative effects of internal economies of scale, companies should steer clear of extreme worker/personnel specialisation and re-evaluate their administrative structure. As for negative external economies of scale, the MardinOSB administration should prioritise the fulfillment of infrastructure needs in the area.

1. Introduction

There are two types of economies of scale, namely internal economies of scale, unique to a company, and external economies of scale for all companies in the same industry. If a company holds a patent for a special machine that provides a huge amount of products, this will allow it to lower its average production costs in comparison to other companies in the market and is referred to as internal economies of scale. In addition, if a government provides a special tax break rate to steel manufacturers who are employing 1,000 workers in order to increase steel production, then all other companies employing fewer than 1,000 workers could also benefit from this tax break by employing 1,000 workers. This will allow them to decrease their production costs and is referred to as external economies of scale (Corporate Finance Institute, 2022).

There are many areas where internal economies and diseconomies of scale occur. Some examples are Procurement Auctions [(Kokott et al., 2019a-b), (Shao, 2017)], Pricing Methods in Biomass Refineries (Ma&Eckhoff, 2012), The Wholesale Market in the Natural Gas Industry (Yu et al., 2019), Production in Crude Oil (Al-Mutairi et al., 2012), Land Occupation Activity for Reservoirs/Dams (Takeuchi, 1997), Determination of Port Capacity and Size of Terminals in Port Industry (Seo&Park, 2016), Cost Estimation in Electricity Generation Services (Maloney, 2001), Operating Efficiency in Real Estate Investment Trusts (Miller et al., 2006), Efficiency in Provision of Public Services in Local Governmental Systems [(Turley et al., 2018), (Drew et al., 2016)], Software Development Projects (Comstock et al., 2011), Finance&Banking, and Manufacturing Sectors.

External economies and diseconomies of scale can arise in various areas of activity, including organised industrial areas, special economic zones (SEZ), sectoral clusters, and technological environments. These advantages and disadvantages are often specific to each area and can affect companies operating within them. It is important for businesses to consider these factors when making decisions regarding location and operations.

This chapter focuses on the analysis of the Mardin Organised Industrial Area (MardinOSB), where the positions of companies within the area are examined in terms of their internal and external economies and diseconomies of scale for the period of 2013-2018, as well as the year 2022. The aim is to gain a better understanding of the economic performance of the companies within MardinOSB and the external factors that contribute to their success or failure.

The construction of this chapter is centered around a survey carried out with the companies in MardinOSB. The objective is to identify the positive and/or negative situations of these companies and provide policy recommendations for their improvement and development.

2. Economies of Scale; Definitions and Literature

2.1. Internal Economies of Scale

Economies of scale are defined as the reduction of production costs resulting from the ability to produce and market goods in huge quantities. On the other hand, diseconomies of scale, are defined as the situation in which the production costs of goods/services increase depending upon total production rise (Cambridge Dictionary, 2022). In a company, as production increases, costs can be decreased so that economies of scale occur. However, when the production volume exceeds a certain level then diseconomies of scale happen (Da Lu&Elhedhli, 2014).

Internal economies of scale refer to a cost advantage of a company due to an increase in its production amount. One of the main reasons for this advantage is lower per-unit fixed cost depending upon the amount of greater production. The second main reason for economies of scale is operational efficiencies and synergies due to an increase in production output (Corporate Finance Institute, 2022). This is related to a decrease (positive internal economies of scale) and an increase (negative internal economies of scale/diseconomies) in the average cost of production [(Şenses, 2017), (Boyes&Melvin, 2013), (Özdemir et al., 2014)].

The main sources of internal economies of scale in a company are the following (Dinler, 2011: 172-173):

- a) Division and specialisation of labour,
- b) Technological development,
- c) Managerial advantages [improvement in management structure (i.e. hiring better skilled and/or high profile managers)],
- d) Monetary benefits (purchasing the required inputs in large quantities or from specialised wholesalers at favourable prices).

However, the main causes of internal economies of scale in a company are the following (Dinler, 2011: 172-173):

- a) Extreme specialisation disadvantages (monotony and nervous breakdown in the labour),
- b) Inefficiency in the management (increase in the number of managers and bureaucracy).

There are some studies on managerial and organisational diseconomies. For example, a paper by Lopez et al. (2015) says that many scholars are pointing to the theoretical connection between company size and its performance in terms of knowledge and communication needs. This is formulated as having high-quality information and knowledge which may result in some disadvantages caused by communication difficulties. This has been defined by some scholars as 'organisational diseconomies' being a potential mechanism of diseconomies of scale. Some scholars also explain this mechanism by mentioning the terms 'knowledge transfer', 'communication costs' plus 'coordination costs' and summarise it as, when a firm becomes greater, it benefits from knowledge and information transfer. However, it also suffers from greater communication and organisational needs. This includes, in addition to having physical capital, the organisational features associated with the structure of the company which can be a significant actor influencing the scalability of returns.

Another paper by Zenger et al. (2009), stating that a manager should make decisions about which assets, activities, and resources are to be within the scope of the company and which should be outsourced by contracts, also says that as a company becomes larger in scale it may still fail due to integration with certain advantages on market. The authors say this does not always mean that the scale and scope of a company should extend. Therefore, organisational failure may cause diseconomies of scale in the firms.

In the paper by Alvarez&Arias (2003), the influence of managerial ability on economies of scale is discussed for dairy farms. The authors state that surveys on economies of scale in agriculture mention their existence to an extent in the level of production. However, they are lost later. Thus, low managerial capability decreases the degree of economies of scale. In this context, they have found that while assuming the managerial ability to be constant, an increase in farm scale can be a significant source of diseconomies of scale. As a result, one of the policy implications of the paper is that traditional agricultural policies for larger farms must include human capacity-building programmes for farmers.

Lopez et al. (2015) examine whether private equity investments have scale-related diseconomies of organisation using 7,453 investments made in 81 countries between 1971 and 2005. The findings indicate that as a corporation grows in size, organisational diseconomies take place.

The finance sector is another area where internal economies of scale are studied. For instance, a paper (Phillips et al., 2018) searches for the availability of diseconomies of scale in fund management in terms of the relationship between size and performance. Although the authors determine that some instruments affect fund size they do not find a relationship with the fund performance. Thus, they state that there is no existence of any evident diseconomies of scale in mutual fund management.

Asongu&Odhiambo (2019) investigate the claim that interest rates are higher for larger banks compared to smaller banks in Africa. The objective of the study is to determine whether this is due to the exploitation of market power or economies of scale. The results show that neither market power nor economies of scale have a significant positive or negative impact on interest rates. Therefore, the study concludes that the higher interest rates observed for larger banks are not due to market power or economies of scale.

Kasman (2005) examines the cost efficiency and economies of scale of 54 banks in Poland and the Czech Republic between 1995 and 2000. The study finds that banks in Poland are more efficient than those in the Czech Republic when environmental variables such as population density, per capita income, demand density, average equity ratio, intermediation ratio, GDP growth, inflation, and main telephone lines are taken into account. However, when these variables are considered, the difference between the two countries decreases significantly. The study also finds that there are clear economies of scale for small and medium-sized banks, while there are diseconomies of scale for large banks in both countries.

There are also some studies on internal economies of scale for the manufacturing sector. Among them is a paper by Truett&Truett (1996) that investigates the motor vehicle and auto parts industries of Mexico in the context of an increase in their output. Results show that it is available for the motor vehicle industry but not for auto parts industry. The authors state that this may partially result from insufficient new technology investments and inefficient production methods of auto parts companies.

In a paper by Yuemei&Zhang (2016), the optimal allocation of asset structure in the manufacturing sector with economies of scale is discussed. The findings show that there is a positive relationship between economies of scale and asset structure in different manufacturing sub-sectors' companies.

2.2. External Economies of Scale

Externalities are benefits or losses that one decision maker grants to another without making a pricing or purchasing decision. They can occur both in production (externalities in production) and in consumption (externalities in consumption), and moreover, they can be both positive (positive externalities in production/consumption) and negative (negative externalities in production/consumption) [(Dinler, 2011: 314), (Ünsal, 2010: 575)].

On the other hand, external economy/external economy of scale is a gain or cost for a company that arises not by its activities but the industry in which it takes place. These can also be both positive (gain) and negative (cost) (Dinler, 2011: 314). One of the most important environments for positive external economies of scale is industrial clustering. An industrial cluster is constructed for production units that use similar infrastructure and production factors plus have forward-backward connections to be more effective and interactive in the same environment, for which Silicon Valley is a good example. Besides, organised industrial areas (OIA), special economic zones (SEZ), techno cities, technoparks, and technological centers are also good examples of such clusters. On the other hand, shopping malls that include various sectoral stores are also among such platforms (Yalta&Yalta, 2021: 481-484).

The aims of special economic zones (SEZ) are to attract capital flow, raise export volume, increase employment level, increase degree of trade openness, and ease economic transformations in an economy. The factors affecting a SEZ's success are location and size, incentive programmes provided, quality and/or presence of production resources (capital, labour), necessary infrastructure, suitable political environment, appropriate legislations, strong institutional structures, and stability of the government (Nazarczuk&Umiński, 2018: 4).

The main sources of external economies of scale can be summarised as follows (Corporate Finance Institute, 2022):

- 1) Concentration economies: There is the advantage of infrastructure and supply chains as well as skilled labour in the industry.
- 2) Information advantages: Since all companies can buy inputs from the same companies, there will be no big price changes because there is a perfect information mechanism in the industry.
- 3) Innovation advantages: Since there are some R&D centres in the cluster, each company can benefit from the innovations developed in these centres.

4) Tax relief: If there is a tax reduction/incentive for purchasing a product, raw material, etc., all companies can take advantage of these benefits.

In another study, the main factors that identify external economies of scale (positive/negative) are summarised as follows (Dinler, 2011: 175-176):

I-Positive external economies of scale are the benefits from;

- a) the purchase of semi-processed products,
- b) the hiring of specialised labour,
- c) the purchase of services (legal, financial advice, etc.),
- d) the presence of infrastructure facilities and related services.

II-Negative external economies of scale are the disadvantages caused by;

- a) inadequate infrastructure,
- b) traffic congestion and its impact on losses in transportation to and from the work area,
- c) environmental pollution,
- d) increase in demand for production factors and, consequently, in their prices.

Pandit et al. (2018) compare cluster economies and diseconomies for multinational enterprises (MNEs) and non-national enterprises (UNEs) in the London financial services cluster and find that there are different economies and diseconomies for MNEs and UNEs in terms of social capital, labour market, local competition, congestion costs, reputation effects, and access to specialised suppliers. The authors note that cluster economies and diseconomies are not the same for MNEs and UNEs, and assume that different firms should evaluate these outcomes taking into account how the economy or diseconomy provides their resource strength, mitigates resource weaknesses, or manages them through resource strength. They add that each firm varies in its ability to reap the benefits of cluster externalities.

SEZ are believed to have a productivity effect on the firms' production. In a study (Aritenang&Chandramidi, 2020) about the city of Batam in Indonesia, the effects of industrial zones on a firm's productivity have been examined but no definite evidence could be found. The authors say that although firm agglomeration has benefits for a firm's productivity, it is not obvious if SEZ policy does. However, in another article (Fan&Scott, 2003), industrial agglomeration and its relationship to economic development&growth in the less-developed countries of East Asia

and especially in China, has been explored and as a result, a positive relationship was found. The authors state that this relationship has been especially determined in more liberalised sectors and regions.

Xi et al. (2021) also study the effect of SEZ on the productivity of producer services and the channels that affect it in China. According to the results, the agglomeration effect is at the core of the process and is positively correlated with the local manufacturing scale. As a result of this strong relationship, a high degree of agglomeration effect occurs in SEZ.

Another paper by Davies&Mazhikeyev (2019) examines the impact of SEZ on a firm's export capabilities, intensity, and volume using relevant data from Africa and Asia. It is shown that SEZ firms in an open economy can export 25% more than a non-SEZ firm. This shows that the export effect of SEZ on a company depends on local economic conditions.

3. Survey on Economies of Scale in MardinOSB

3.1. Methodology

This chapter is based on a field study conducted with companies in Mardin Industrial Area (MardinOSB) (Mardin is a city in the southeastern region of Turkey) with the assistance of students from the Departments of Economics and Business at the Faculty of Economics and Administrative Sciences, Mardin Artuklu University. Although the number of companies in MardinOSB was 141, the survey was conducted with a specific sample. While 22 companies were surveyed in 2013-2017, only 14 were surveyed in 2018. On the other hand, due to Covid-19 Pandemic, no survey was conducted for 2019-2021. After this break, another survey of 34 companies in MardinOSB was conducted in 2022, which allowed for a comparison of the situation before and after the Pandemic.

For better analyses, the number of samples should actually be larger. However, for various reasons, such as seasonal inactivity, unwillingness of companies, etc., only the above numbers could be contacted. With this number of companies, the representativeness of MardinOSB for the survey is about 16% of the total.

Different sources [(Boyes&Melvin, 2013), (Corporate Finance Institute, 2022), (Dinler, 2011), (Özdemir et al., 2014)] were used for the content of the questionnaire. The questionnaire includes three sections, which are explained in more details below:

- The first section contains general information about the company and the contact person.
- The second section, containing information about a company's internal economies of scale, is classified as 'positive' and 'negative'.
- The third section, seeking information about the company's external economies of scale, is again classified as 'positive' and 'negative'.

Companies were expected to provide 'yes' and 'no' responses. However, additional comments from companies were also solicited in each subsection if available. The number and industries of companies for each year are shown in Table 1.

Table 1: Numbers and sectors of the companies surveyed

Year	Food sector*	Other sectors**	Total
2013	14	8	22
2014	14	8	22
2015	15	7	22
2016	15	7	22
2017	10	12	22
2018	12	2	14
2022	24	10	34
Grand Total	104	54	158

* The food sector produces mainly flour, boiled and pounded wheat (bulgur), semolina, macaroni, lentils, vegetable oil, nuts, and pickles.

** Textile, furniture, construction, metal work, plastic, chemical work, laboratory services.

3.2. Information on MardinOSB

Information about the industrial structure of Mardin is as follows:

- Currently, there is one organised industrial area in Mardin. A second one is under construction.
- There are four small industrial sites (KSS) including 750 businesses in Mardin districts: Artuklu district (190 businesses), Kızıltepe district (200 businesses), Nusaybin district (154 businesses), Midyat district (206 businesses).
- Another KSS is currently under construction in the Kızıltepe district.

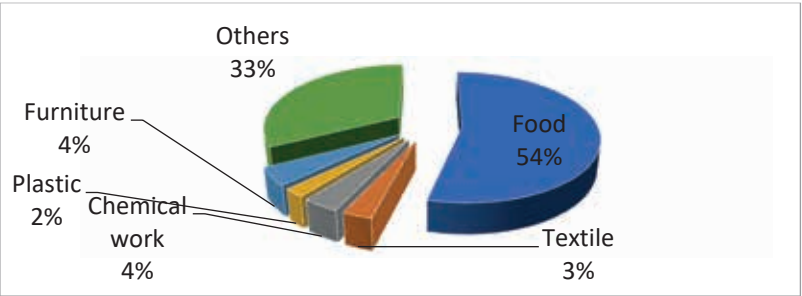
Detailed information about MardinOSB can be found below (Mardin Organize Sanayi Bölgesi, 2022):

- It was established in 1976 on 3,000 hectare site along the Mardin-Kızıltepe road.
- The transportation network of MardinOSB includes road, rail, and air links.
- The area is 1 km away from the state railway and 5 km away from Mardin Airport.
- While the state railway runs in the north of the area, the state road D400/E90 passes in the south.
- There are 207 industrial plots in the area.
- Depending on the season, the number of employees varies between 3,750 and 4,500.

The number of leading manufacturing companies with their sectoral classification is listed below:

Sectors	Food	Textile	Chemical work	Plastic	Furniture	Others
Number of companies	73	4	5	3	6	44

The sectoral distribution of companies in MardinOSB is shown in Figure 1.



Graph 1: Sectoral distribution of the companies in MardinOSB
Source: Mardin Organize Sanayi Bölgesi (MardinOSB, 2022).

As will be seen, half of the companies in MardinOSB are in the food sector. Other sectoral rates are 4% Furniture, 4% Chemical work, 3% Textile, 2% Plastic, and 33% others (construction, metal work, laboratory services, recycling, electrical spare parts, shoemaking, glassware, organic fertilisers, energy, etc.).

3.3. Assessments on Internal Economies of Scale in MardinOSB

In this section, the situation of firms in MardinOSB is classified as 'positive' or 'negative' in terms of internal economies of scale. First, the positive internal economies of scale are examined using the data in Table 2.

Table 2: Positive internal economies of scale in MardinOSB

		Q1 (Labour division & specialisation)		Q2 (Technological development)		Q3 (Managerial advantages)		Q4 (Monetary advantages)	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
2013	Yes	21	95.5	21	95.5	18	81.8	19	86.4
	No	1	4.5	1	4.5	4	18.2	3	13.6
2014	Yes	22	100	21	95.5	19	86.4	21	95.5
	No	0	0	1	4.5	3	13.6	1	4.5
2015	Yes	20	90.9	19	86.4	17	77.3	18	81.8
	No	2	9.1	3	13.6	5	22.7	4	18.2
2016	Yes	19	86.4	21	95.5	17	77.3	17	77.3
	No	3	13.6	1	4.5	5	22.7	5	22.7
2017	Yes	21	95.5	21	95.5	18	81.8	18	81.8
	No	1	4.5	1	4.5	4	18.2	4	18.2
2018	Yes	14	100	14	100	14	100	13	92.9
	No	0	0	0	0	0	0	1	7.1
2022	Yes	29	85.3	32	94.1	27	79.4	29	85.3
	No	5	14.7	2	5.9	7	20.6	5	14.7

Based on the data presented in Table 2, the positive internal economies of scale of the companies in MardinOSB from 2013 to 2018 are presented as follows:

- The frequency rates for the item "Division and specialisation of labour (Q1)" range from 86.4% to 100% for 'Yes', but from 0% to 13.6% for 'No'.
- Frequency rates for the item "Technological development (Q2)" show that respondents who answered 'Yes' range from 86.4% to 100%, while those who answered 'No' range from 0% to 13.6%.

- Responses to the question “Managerial advantages (Q3)” range from 0% to 22.7% for ‘No’, while they range from 77.3% to 100% for ‘Yes’.
- Another item for positive internal economies of scale is “Monetary advantages (Q4)” with frequency rates ranging from 77.3% to 95.5% for those who answered ‘Yes’, while rates for those who answered ‘No’ range from 4.5% to 22.7%.

The analysis of the responses shows that companies in MardinOSB have benefited greatly from positive internal economies of scale from 2013 to 2018. It can be concluded that the companies were positively influenced by “Division and specialisation of labour”, “Technological development”, “Managerial advantages”, and “Monetary advantages”.

The same tendency exists after the Pandemic, as the companies answered ‘Yes’ to the question with high frequency. Thus, they have benefited from all the positive internal economies of scale mentioned above.

Table 3: Negative internal economies of scale in MardinOSB

		Q5 (Extreme specialisation)		Q6 (Managerial inefficiency)	
		Frequency	%	Frequency	%
2013	Yes	10	45.5	5	22.7
	No	12	54.5	17	77.3
2014	Yes	9	40.9	5	22.7
	No	13	59.1	17	77.3
2015	Yes	11	50	8	36.4
	No	11	50	14	63.6
2016	Yes	7	31.8	8	36.4
	No	15	68.2	14	63.6
2017	Yes	7	31.8	11	50
	No	15	68.2	11	50
2018	Yes	8	57.1	3	21.4
	No	6	42.9	11	78.6
2022	Yes	13	38.2	15	44.1
	No	21	61.8	19	55.9

According to Table 3, the negative internal economies of scale of the companies in MardinOSB for the years 2013 to 2018 are as follows:

- The answers to the question “Extreme specialisation (Q5)” show that the percentage of ‘Yes’ answers ranges from 31.8% to 57.1%, while the percentage of ‘No’ answers ranges from 42.9% to 68.2%.
- The responses to the question “Inefficiency in management (Q6)” show that the percentage of ‘Yes’ responses ranges from 21.4% to 50%, while the percentage of ‘No’ responses ranges from 50% to 78.6%.

The data in Table 3 show that the companies which say ‘No’ to a high degree were not seriously affected by a negative internal scale economies in 2013-2018. This means that the companies faced “Extreme specialisation disadvantages” and “Inefficiencies in management” only to a very small extent.

Similarly, compared to ‘Yes’, companies also answered ‘No’ for most of 2022. This means that the impact of the negative internal scale economies was not too bad. Therefore, after the Pandemic, companies maintained their positions on “Extreme specialisation disadvantages” and “Managerial inefficiency” as they were before.

3.4. Assessments on External Economies of Scale in MardinOSB

Here the positions of the companies in MardinOSB in terms of external economies of scale as ‘positive’ or ‘negative’ shall be searched. Their positive external scale economies are checked according to the data available in Table 4.

Based on the data presented in Table 4, the positive external scale economies of companies in MardinOSB from 2013 to 2018 are detailed below:

- The frequency rates of the item “Purchasing semi-processed products (Q7)” indicate that respondents who answered ‘Yes’ range from 40.9% to 72.7%, while respondents who answered ‘No’ range from 27.3% to 59.1%.
- The frequency rates for the item “Hiring specialised labour (Q8)” show that responses for ‘Yes’ range from 68.2% to 85.7%, while responses for ‘No’ range from 14.3% to 31.8%.
- The frequency rates for the item “Purchasing services (Q9)” indicate that respondents who answered ‘Yes’ range from 81.8% to 100%, while respondents who answered ‘No’ range from 0% to 18.2%.

- The item “Presence of infrastructure facilities and related services (Q10)” received responses ranging from 50% to 86.4% for ‘Yes’, while responses for ‘No’ range from 13.6% to 50%.

Table 4: Positive external economies of scale in MardinOSB

		Q7 (Purchasing semi-processed products)		Q8 (Hiring Specialised labour)		Q9 (Purchasing services)		Q10 (Infrastructure facilities & services)	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
2013	Yes	9	40.9	15	68.2	18	81.8	15	68.2
	No	13	59.1	7	31.8	4	18.2	7	31.8
2014	Yes	16	72.7	18	81.8	21	95.5	11	50
	No	6	27.3	4	18.2	1	4.5	11	50
2015	Yes	16	72.7	16	72.7	20	90.9	17	77.3
	No	6	27.3	6	27.3	2	9.1	5	22.7
2016	Yes	13	59.1	16	72.7	22	100	13	59.1
	No	9	40.9	6	27.3	0	0	9	40.9
2017	Yes	14	63.6	18	81.8	18	81.8	19	86.4
	No	8	36.4	4	18.2	4	18.2	3	13.6
2018	Yes	6	42.9	12	85.7	14	100	11	78.6
	No	8	57.1	2	14.3	0	0	3	21.4
2022	Yes	24	70.6	25	73.5	24	70.6	23	67.6
	No	10	29.4	9	26.5	10	29.4	11	32.4

The responses in Table 4 show that firms have been in different positions with respect to positive external economies of scale during 2013-2018. In general, however, they have benefited from all advantages. In this regard, they have used the advantages of “Purchase of semi-finished products”, “Hiring skilled workers”, “Purchase of services”, and “Presence of infrastructure facilities and related services”.

As far as 2022 is concerned, with a high percentage of ‘Yes’ answers to all questions, companies took full advantage both before and after the Pandemic. In other words, the companies took advantage of the positive external scale economies.

Table 5: Negative external economies of scale in MardinOSB

		Q11 (Infrastructure insufficiency)		Q12 (Traffic jam & losses in transport)		Q13 (Environmental pollution)		Q14 (Production factors demand & price rises)	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
2013	Yes	16	72.7	14	63.6	16	72.7	11	50
	No	6	27.3	8	36.4	6	27.3	11	50
2014	Yes	13	59.1	10	45.5	15	68.2	17	77.3
	No	9	40.9	12	54.5	7	31.8	5	22.7
2015	Yes	9	40.9	7	31.8	13	59.1	14	63.6
	No	13	59.1	15	68.2	9	40.9	8	36.4
2016	Yes	13	59.1	9	40.9	9	40.9	11	50
	No	9	40.9	13	59.1	13	59.1	11	50
2017	Yes	12	54.5	11	50	15	68.2	15	68.2
	No	10	45.5	11	50	7	31.8	7	31.8
2018	Yes	7	50	5	35.7	7	50	11	78.6
	No	7	50	9	64.3	7	50	3	21.4
2022	Yes	25	73.5	18	52.9	20	58.8	28	82.4
	No	9	26.5	16	47.1	14	41.2	6	17.6

Table 5 provides the following information on the negative external scale economies in MardinOSB in the period 2013-2018:

- The frequency rates for the item “Inadequate infrastructure (Q11)” range from %40.9 to %72.7 for ‘Yes’, but vary from %27.3 to %59.1 for ‘No’.
- Scores for the item “Traffic congestion and its impact on losses in transport to and from work (Q12)” range from %31.8 to %63.6 for ‘Yes’, but range from %36.4 to %68.2 for ‘No’.
- Responses for the item “Environmental pollution (Q13)” range from %40.9 to %72.7 for ‘Yes’, but vary from %27.3 to %59.1 for ‘No’.
- Finally, the frequency rates of the item “Increase in demand of production factors and, therefore, in their prices (Q14)” range from %50 to %78.6 for ‘Yes’, but range from %21.4 to %50 for ‘No’.

In the context of the data in Table 5, firms’ responses varied over the period 2013-2018, but in general they suffered more or less from negative external economies of scale. Thus, they

faced the disadvantages of “Inadequate infrastructure”, “Traffic congestion”, “Environmental pollution”, and “Increase in demand for production factors and their prices” during these years.

Similar to 2013-2018, the percentage of ‘Yes’ answers to all questions also increased in 2022, which means that firms in MardinOSB were negatively affected by the external economies of scale after the Covid-19 Pandemic.

4. Conclusion

This chapter presents the results of a survey conducted among enterprises in the Mardin Organised Industrial Area (MardinOSB). The survey consisted of 158 questionnaires completed during the period 2013-2018 and in 2022. The aim of the survey was to understand the attitude of these companies towards the positive and negative internal and external economies of scale and how they were affected by them.

Based on the data collected and analysed, the positions of the companies in relation to the positive and negative internal and external economies of scale have been identified for the aforementioned dates:

- The analysis shows that the companies in MardinOSB benefited greatly from the positive internal economies of scale during the period 2013-2018, and this trend has continued after the outbreak of the Covid-19 Pandemic. The benefits were observed in the form of division and specialisation of labour, technological advancements, managerial advantages, and monetary benefits.
- The responses of the companies indicate that they were not significantly affected by negative internal effects during the period 2013-2018, and this trend had continued until 2022, with the majority of companies answering ‘No’. This suggests that negative internal economies of scale such as extreme specialisation disadvantages and inefficiencies in management have not caused significant harm to companies and that their impact has continued to decline after the Covid-19 Pandemic.
- Analysis of the data collected shows that firms were differently positioned in terms of positive external economies of scale during 2013-2018. However, they were found to have generally benefited from all the advantages including purchase of semi-finished products, hiring of skilled labour, purchase of services,

and presence of infrastructure facilities and related services. These advantages also benefited the companies after the Covid-19 Pandemic, as they were able to maintain their positions before 2022.

- During 2013-2018, businesses in MardinOSB responded differently to negative external economies of scale. However, overall, these companies were affected to some extent by negative external economies of scale. This trend continued after the outbreak of the Pandemic. It means that in both cases, enterprises operating in MardinOSB faced challenges such as inadequate infrastructure, traffic congestion, pollution, and rising costs of production factors.

Based on the findings of this chapter, policy recommendations can be made aimed at enhancing internal and external advantages and minimising the associated disadvantages. To benefit from positive internal economies of scale, companies can intervene in their internal processes. To achieve this, they can improve their division and specialisation of labour, introduce the necessary technological advances, increase the efficiency of their management systems, and review their monetary and fiscal procedures. In this way, companies can benefit significantly from internal economies of scale.

To avoid negative internal economies of scale, companies should avoid over-specialising their workers and staff. They should also consider revising their administrative structure to increase management efficiency. These measures can help companies to avoid the negative effects of internal economies of scale.

While internal economies of scale are directly related to the internal structure of firms, external economies of scale derive from the area/zone in which they operate. In this case, firms in MardinOSB benefit from the positive external economies of scale, while they suffer from the negative external economies of scale as they locate there. To increase the benefits of positive external economies of scale, the management of MardinOSB should take the necessary measures. For example, they can encourage enterprises to exchange their semi-finished products, specialised labour and services at reasonable prices and conditions. On the other hand, the MardinOSB management should remove any bottlenecks in infrastructure facilities and related services in the area.

The negative external economies of scale can directly affect businesses in industrial areas or zones. Therefore, it is crucial to remove bottlenecks and related problems. In this regard, the MardinOSB administration should work closely with government authorities to complete the necessary infrastructure, such as building appropriate roads to avoid traffic congestion. They also need to establish an efficient communication system to match the supply and demand of production factors and prevent unexpected price increases. In addition, both MardinOSB and the companies operating in the area should take the necessary measures to minimise pollution.

This chapter stands out from similar studies as it is one of the first to examine the positive and negative effects of internal and external economies of scale in an industrial area. In addition, it analyses the changes before and after the Pandemic Covid-19, which distinguishes this study from others in the field. However, the research would benefit from further expansion to include surveys in the years following the Pandemic. It would be particularly valuable to conduct new studies comparing pre- and post-Pandemic changes. Such research could provide targeted policies and better recommendations for the future.

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6. Appendix: Survey Form for Determination of Internal/External Economies of Scale of Companies in Mardin Organised Industrial Area (MardinOSB)

I) General Information on the Company

Name of the company
Field of activity
Name of the person interviewed
Position of the person interviewed in the company
Communication information

II) Information on company's internal economies of scale

	Yes (=exists)	No (=inexists)
II.a) Positive internal economies of scale		
1) Division and specialisation of labour		
2) Technological development		
3) Managerial advantages		
4) Monetary advantages		
* Any additions?		

	Yes (=exists)	No (=inexists)
II-2) Negative internal economies of scale		
5) Extreme specialisation disadvantages		
6) Inefficiency in the management		
* Any additions?		

III) Information on a company's external economies of scale

	Yes (=exists)	No (=inexists)
III.a) Positive external economies of scale		
7) Purchasing semi-processed products		
8) Hiring specialised labour		
9) Purchasing services		
10) Presence of infrastructure facilities and related services		
* Any additions?		

	Yes (=exists)	No (=inexists)
III.b) Negative external economies of scale		
11) Insufficiency in infrastructure		
12) Traffic congestion and its impact on losses in transportation to and from the work area		
13) Environmental pollution		
14) Increase in demand of production factors and, consequently, in their prices		
* Any additions?		

Sources: Boyes&Melvin, 2013; Corporate Finance Institute, 2022; Dinler, 2011; Özdemir et al., 2014.

Mardin'in tarım, sanayi ve hizmet sektörlerindeki tematik bazı sorunlarını ele alan ve bunlara yönelik çözümler geliştiren bu eser, her sektöre ait bir ana kısımda dörder adet olmak üzere toplamda 12 bölümden oluşmaktadır. Her ana kısımda bir bölüm sırasıyla tarım, tekstil ve turizm sektörlerinin temel sorunlarına ve ilgili kurumlarla potansiyel iş birliği imkânlarına yoğunlaşırken, diğer bölümler ise çeşitli tematik sorunları ele alarak çözümlerine odaklanmaktadır.

Eserin her bölümünde ya bir saha araştırması ya da bir ekonometrik analiz mevcuttur. Zira amaç, sorunları ilk elden tespit ederek ayakları yere basan çözüm tekliflerinde bulunmaktır. Elbette Mardin'in her türlü sorununa çözüm bulma iddiası yoktur, fakat bu eserin özellikle bazı yapısal nitelikli meselelere çözümler getirmek suretiyle şehrin ve bölgenin kalkınmasına yönelik önemli bir adım niteliğinde olduğu ifade edilebilir.

This book, dealing with some thematic problems of Mardin in the agriculture, industry, and service sectors and seeking solutions for them, consists of a total of 12 chapters, four of which are in a main section belonging to each sector. In each main section, one chapter focuses on the main problems of the agriculture, textile, and tourism sectors respectively and potential cooperation opportunities with relevant institutions, while other ones focus on various thematic problems and their solutions.

Each part of the book includes either a field study or an econometric analysis. Because the aim is to identify the problems by first hand and to propose concrete solutions accordingly. Of course, there is no claim to find solutions to all kinds of problems of Mardin, but it can be stated that this book is a significant step towards the development of the city and the region, especially by proposing the solutions of some structural issues.

